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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,868	05/21/2002	David Crist Gabriel	201-0268	2432

32997 7590 05/13/2004
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EXAMINER

RO, BENTSU

ART UNIT PAPER NUMBER

2837

DATE MAILED: 05/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant No.

10/063,868

Applicant(s)

GABRIEL ET AL.

Examiner

Bentsu Ro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15 and 25 is/are allowed.
- 6) ☒ Claim(s) 16-20 is/are rejected.
- 7) ☒ Claim(s) 21-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

SECOND OFFICE ACTION --- A FINAL REJECTION

1. Applicant should amend the claims as follows:

- Claim 2, line 1, delete the word "method".
- Change the dependency of claim 7 to depend upon claim 4. This change is required because the recitation "said positive feedback assembly" is defined in claim 4.
- Change the dependency of claim 8 to depend upon claim 4. This change is required because the recitation "said positive feedback assembly" is defined in claim 4.
- Claim 16, last line, change the recitation "said certain operational" to --said certain operational state--.

2. The drawing correction Figure 1, filed 4/2/2004 is acceptable. Formal drawing is now required.

3. Claims 16 and 20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Klauschek et al US Patent No. 3,919,609. (This is a new reference.)

<u>The claims:</u>	<u>Klauschek et al teaching:</u>
Claim 16. (Currently amended) A method for controlling torque within an electric	Fig. 1 teaches a method and an apparatus for controlling torque within an electric

drive assembly, said method comprising the steps of

comparing a produced voltage command with a second voltage command;

drive assembly;

Fig. 1 includes a 3Φ motor 2;

Fig. 1, inside a torque correction circuit 20, there are two signals, one is a torque signal "D" (a voltage signal representing an absolute torque) and the other one is a reference torque signal "D*" (again, a voltage signal representing a reference torque);

the D and D* signals, after passing through the respective absolute circuits 21, 22, generate an absolute torque signal IDI and an absolute reference torque signal ID*I;

these two absolute signals are compared in a summing junction 23 to produce a torque error signal ΔD ;

thus, either one of the absolute torque signal IDI and the absolute reference signal ID*I is a produced voltage command, and the other one is a second voltage command;

the summing junction 23 is a comparing

<p>ascertaining the existence of a certain operational state of said electric drive assembly based upon said comparison;</p> <p>and generating a signal indicative of undesired torque when the existence of said certain operational <u>state</u> (word missing) is ascertained.</p>	<p>circuit for comparing these two voltage signals;</p> <p>column 3, lines 54-55 clearly states that "a <i>summing junction (or comparator)</i>";</p> <p>if the comparator 23 has an error output signal ΔD, namely, ΔD has a non-zero value, then the existence of a certain operational state is ascertained;</p> <p>the torque error signal ΔD, after passing through a torque control circuit.24, generates a harmonic torque ΔI^*, this harmonic torque ΔI^* is a signal indicative of undesired torque.</p>
<p>Claim 20.</p>	<p>Same as that of claim 16, but broader.</p>

4. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klautschek et al in view of Piety et al US Patent No. 5,875,420. (This is a new reference.)

Regarding claims 17-19, Klautschek et al do not teach a positive feedback assembly to notify an operator of the undesired torque generation. However, a positive feedback assembly is taught by Piety et al.

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Piety et al Fig. 1 shows a machine vibration monitoring system. Fig. 3 shows a process for determining deviation severity for a complete vibration spectrum of the machine.

It is noted that the existence of harmonics in a motor causes the motor to vibrate. Klautschek et al teach a method and an apparatus to reduce the motor harmonics so that the motor would not vibrate. However, there is a possibility that Klautschek's device fails or operated improperly. In that case, adding a motor vibration monitoring system would be desirable.

In view of Piety et al teaching, it would have been obvious to a skilled person in the art to add a monitoring system of Piety et al to the motor drive system of Klautschek to achieve the same subject matter as claimed.

5. Claims 21-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 1-15 and 25 are allowable.

7. Applicant's arguments with respect to claims 16 etc. have been considered but are moot in view of the new ground(s) of rejection.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication should be directed to Bentsu Ro at telephone number 571 272-2072.


Bentsu Ro
Senior Examiner
Art Unit 2837